



Epi News



June 2007

Invasive Meningococcal Disease

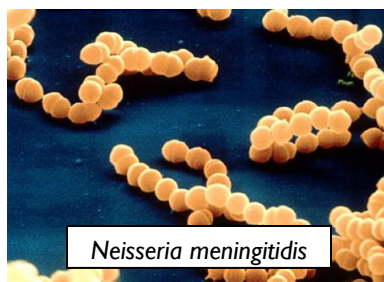
In early March, a Northern Arizona University (NAU) student developed fever, severe headache, and stiff neck. He was admitted to the intensive care unit at Flagstaff Medical Center (FMC) with a suspect diagnosis of meningococcal meningitis. His cerebrospinal fluid (CSF) contained Gram-negative diplococci, and he was subsequently confirmed by CSF antigen screen and CSF culture to be infected with *Neisseria meningitidis*, the causative agent of meningococcal disease. The last previous case of invasive meningococcal disease in Coconino County occurred in December of 2004.

The Coconino County Health Department (CCHD), in cooperation with NAU and FMC, launched an investigation into the case. Several people were found to have been potentially exposed to the case, and they received prophylactic antibiotics. The student lived in a residence hall on the NAU campus. However, no secondary cases resulted from this case. Although the illness was very severe, the student recovered and was released from the hospital after two weeks.

In late March, a California woman traveling to Arizona with her children became ill one morning with gastrointestinal symptoms. By evening of the same day, her illness became more severe, and she was transported by ambulance from her hotel to Flagstaff Medical Center. The woman was admitted to the ICU with fever and gastrointestinal symptoms. While in the ICU, she developed a rash on her face that progressed very rapidly to her arms and torso. Hemorrhaging occurred from multiple orifices. She died several hours after being admitted.

The woman's death was initially

investigated as an unexplained death with a history of fever. CCHD investigators soon learned that a blood culture was positive for *Neisseria meningitidis*. The woman's household contacts were treated with prophylactic antibiotics to prevent them from developing the disease.



These two cases of invasive meningococcal disease were not connected. The onset of illness in the fatal case was more than 10 days after the NAU student was admitted to the hospital, which is longer than the maximum incubation period. Moreover, the California woman had not traveled to Flagstaff, and she did not arrive in Coconino County until after her symptoms began.

The major invasive syndromes caused by *Neisseria meningitidis* are meningitis (infection of the lining of the brain) and septicemia (infection of the bloodstream). The symptoms of the illness may include sudden onset of intense headache, fever, stiff neck, nausea, vomiting, joint pain, and sensitivity to light. A petechial rash develops later in about half of patients. The disease is transmitted through close contact, which can include any activity that results in the transfer of fluids from the nose and mouth (e.g. saliva, mucous, or large droplets created by sneezing or coughing) from a contagious individual to another person's mouth or nose. The incubation period is usually

3 or 4 days (range 2-10 days). Physicians who suspect *Neisseria* illness in a patient should report the case to CCHD within 24 hours.

Meningococcal disease can be prevented through immunization with the meningococcal vaccine, which is recommended for college freshman living in dormitories and for children 11 or 12 years of age. Beginning in September of 2008, children 11 years of age will be required to receive this vaccine to enroll in school.

CCHD Disease Reporting

Contact Information:

928-522-7920 (8AM – 5PM Mon-Fri.)
928-913-6744 (after hours urgent reports)

928-522-7922 FAX
Mail To: CCHD
2625 N. King St.,
Flagstaff, AZ 86004



More information available at:
<http://www.coconino.az.gov/health.aspx?id=1183>

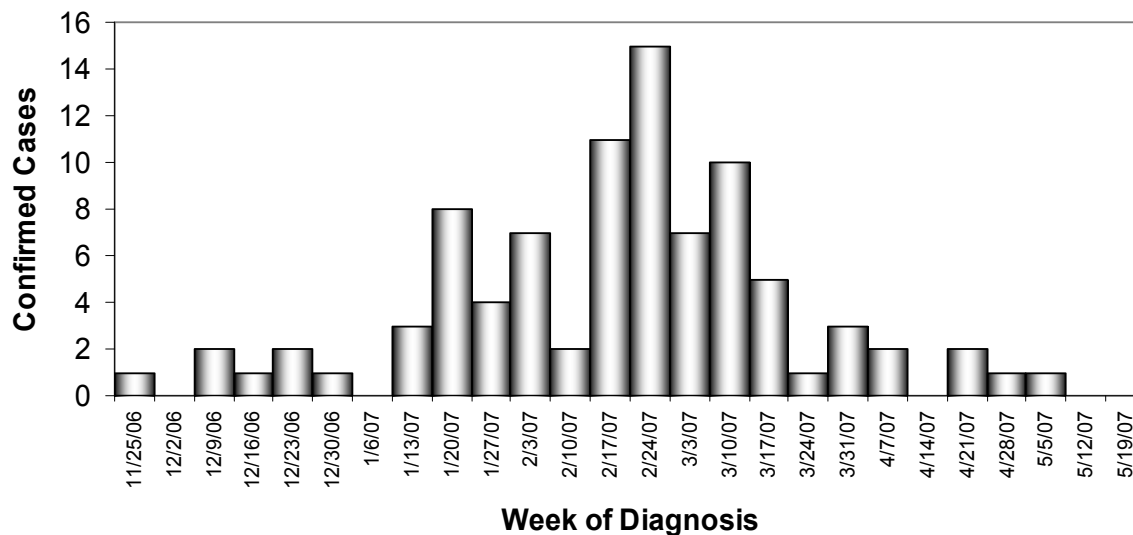
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Thank you.

Influenza - Coconino County - 2006-2007



Communicable Disease Summary Report – Selected Diseases*

Diagnosis	Jan - May 2007	Jan - May 2006
campylobacteriosis	4	11
chlamydia	155	142
coccidioidomycosis	5	1
cryptosporidiosis	3	0
giardiasis	4	2
gonorrhea	14	17
<i>Haemophilus influenzae</i> : invasive disease	2	1
hepatitis A	2	3
hepatitis B	11	11
hepatitis C	24	34
herpes genitalis	11	5
meningococcal invasive disease	1	0
methicillin-resistant <i>Staphylococcus aureus</i> : invasive	5	7
mumps	0	1
pertussis	1	33
salmonellosis	1	6
shigellosis	6	12
<i>Streptococcus pneumoniae</i> : invasive disease	15	5
streptococcal group A: invasive disease	2	6
syphilis	9	2
trichomoniasis	3	1
varicella	19	14

*The number of cases diagnosed during the given year in residents of Coconino County. Data are provisional and subject to change.

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